

FORECCAST

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The climate is changing:  
The forests of Haut-Languedoc are facing!

# The forecast project

Objective : **adapt our forests to climate change**

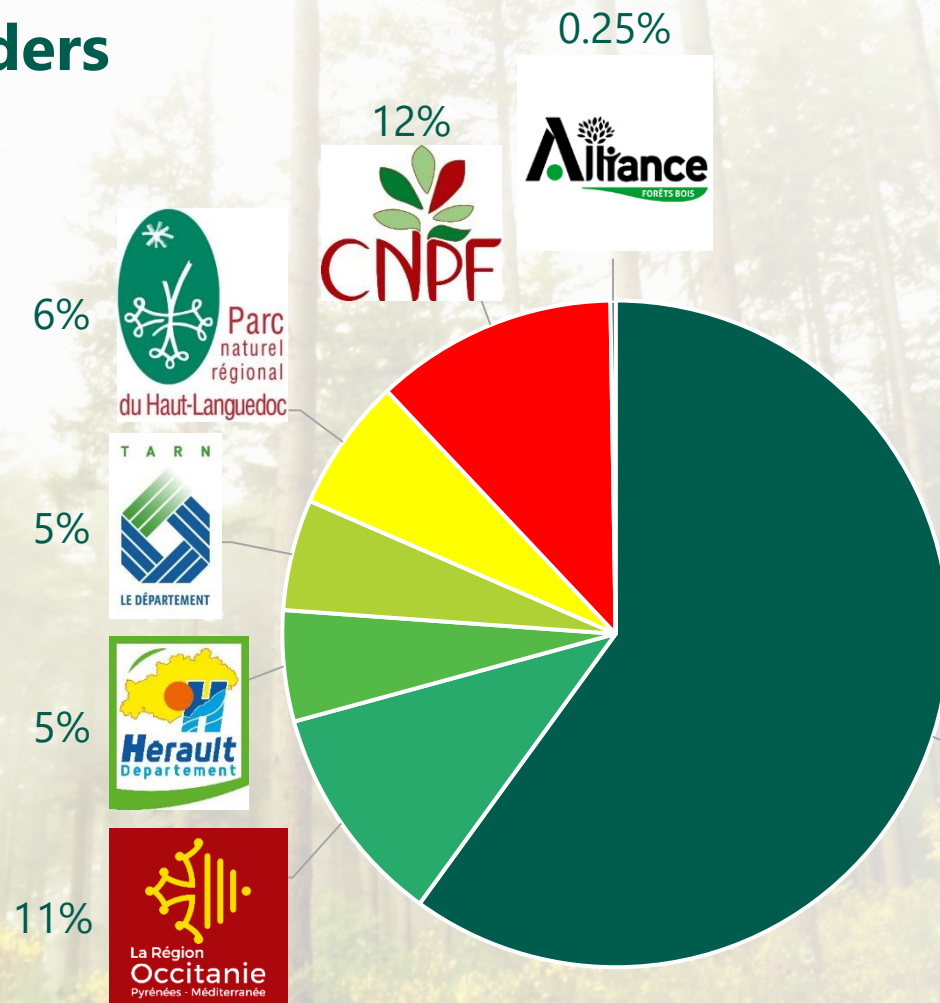
Target: forest managers and owners

- Integrate criteria based on climate change scenarios
- Adapt their management strategy to the scale of the forest plot



# Funders and beneficiaries

## • Funders



## • Beneficiaries

- PNRHL
- CNPF
- AFB

Project amount :  
1 314 330€

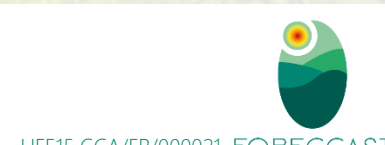


60%



# Technical partners

- AgroParisTech Nancy : test model testing for the app
- ENSAT : carbon cycle measurements
- INUC : perception survey
- INRA : soil survey
- IGN : habitat distribution data
- Météo France : meteorological data



# Main actions

Adapted management of existing stands

Action plan to anticipate crises

Decision support tools: mobile application

Reforestation adapted to climate change

Organization and participation in events

Perception survey

Communication tools



# Perception survey

**What is the perception of climate change by actors in the forest-wood sector, elected officials and residents of the Park ?**



- Over 600 people interviewed
- Most convinced that climate change exists
- 2/3 believe that forest management needs to be changed in relation to climate change

# In the event of a climate crisis

## Set up a monitoring system and an action plan to anticipate crises in a forest area affected by climate change :

- 🌲 Consultation between the actors of the territory
- 🌲 Local survey on feedback following 2003
- 🌲 Participatory problem reporting system
- 🌲 March 2018: Practical guide → action methodology

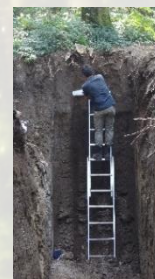
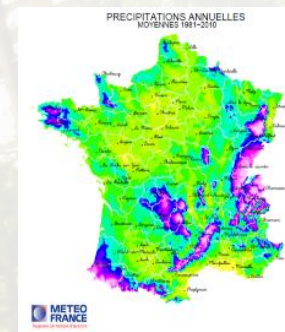
A symposium, addressed to professionals in the forest-wood sector, was organized on March 27, 2018 to present the approach

## A decision support tool for managing stands according to available site and climatic criteria



Diagnoses based on::

- 🌲 Climate models
- 🌲 Soil Module
- 🌲 Autecology of species
- 🌲 Field observations



Proposes diagnostics for existing stands and for reforestation projects



**Decision support tool and not decision tool**



# Some realization on fields

- **Test of new species potentially better adapted to future climate, arboretum**
- **Test new technical itineraries with mixed stands, to dilute risks, and improve resilience by higher biodiversity,**
- **Adaptatives itineraries in existing broadleaves stands to improve production and resilience**
- **Improve hydric balance in young stands by thinning and pruning**



# Improvement of Hydric Balance

## • 4 experimental plots of thinings

- Douglas fir stands planted in 2000 (22 years)
  - Cutting 30% and 44% of the trees
- Meleze hybrid stands planted in 1998 (24 years)
  - Cutting 50% of the trees, and pruning best trees
- Atlantic Cedar 1992 (30 yrs)
  - Cutting 20% and 40% of the trees,
- Nordmann Fir 50 yrsn never thinned before
  - Cutting 20% of the volume, systematic and selective thinning
- Control plot without thinning in each site



# Mitigate climatic risks

- **Test of silvicultural itineraries of forests stands diversification to mitigate climatic risks**
- **6 experimental stands**
  - Spruce, Douglas fir, cedar, beech, chestnut tree,
  - Thinning to promote natural regeneration and mixed stands



# Mobile Appli Foreccast by Bioclimsol



- **Mobile appli to diagnose the vulnerability of forests stands to climate change, dryness, heat waves, etc.**

- Production and promotion of the use of the appli,
- App training of local forests managers, and advisers
- App assess the vulnerability of the existing stands, but also to classify the forests species adapted to the future climate



# Conserve Natural Habitat of Beech

- **to conserve acidic holly beech forests by suitable silvicultural itineraries (sanitary thinning, natural regeneration)**
  - It is a question of conserving nature habitat through adapted forestry.
- **3 experimental plots in beech habitat**
  - Thinning through holes in stand to promote natural regeneration of beech, but also other species, oak, silver fir ...
  - Improvement of beech coppice by systematic thinning and identification of quality trees.



# Thank you

